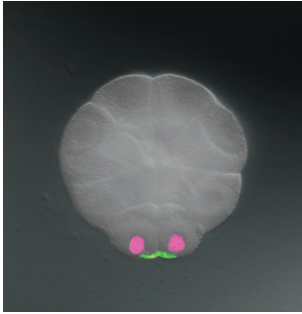
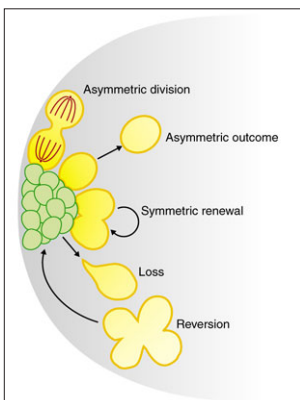


Development



Cover: A 16-cell stage *Ciona intestinalis* embryo probed for *Ci-pem-1* mRNA (green) and Ci-Pem-1 protein (magenta). In the pair of germline blastomeres, *Ci-pem-1* mRNA is highly concentrated in the postplasm at the posterior cortex, whereas Ci-Pem-1 protein is also enriched in the nuclei. See Research article by Shirae-Kurabayashi et al. on p. 2871.



Tissue maintenance depends on stem cells that reside in specialised niches. Here, de Cuevas and Matunis review recent studies of the *Drosophila* testis and discuss how germline and somatic stem cells within this niche respond to local and systemic changes. See Review on p. 2861.

MEETING REVIEW

- 2855** Development of the musculoskeletal system: meeting the neighbors
Kardon, G.

REVIEW

- 2861** The stem cell niche: lessons from the *Drosophila* testis
de Cuevas, M. and Matunis, E. L.

DEVELOPMENT AND STEM CELLS

- 2871** Ci-Pem-1 localizes to the nucleus and represses somatic gene transcription in the germline of *Ciona intestinalis* embryos
Shirae-Kurabayashi, M., Matsuda, K. and Nakamura, A.
- 2883** Serial specification of diverse neuroblast identities from a neurogenic placode by Notch and Egfr signaling
Hwang, H. J. and Rulifson, E.
- 2895** *tcf21*⁺ epicardial cells adopt non-myocardial fates during zebrafish heart development and regeneration
Kikuchi, K., Gupta, V., Wang, J., Holdway, J. E., Wills, A. A., Fang, Y. and Poss, K. D.

RESEARCH REPORTS

- 2903** Symmetry breaking in mouse oocytes requires transient F-actin meshwork destabilization
Azoury, J., Lee, K. W., Georget, V., Hikal, P. and Verlhac, M.-H.
- 2909** Cxcl12 evolution – subfunctionalization of a ligand through altered interaction with the chemokine receptor
Boldajipour, B., Doitsidou, M., Tarbashevich, K., Laguri, C., Yu, S. R., Ries, J., Dumstrei, K., Thelen, S., Dörries, J., Messerschmidt, E.-M., Thelen, M., Schwillie, P., Brand, M., Lortat-Jacob, H. and Raz, E.

RESEARCH ARTICLES

- 2915** Neuroblast migration along the anteroposterior axis of *C. elegans* is controlled by opposing gradients of Wnts and a secreted Frizzled-related protein
Harterink, M., Kim, D., Middelkoop, T. C., Doan, T. D., van Oudenaarden, A. and Korswagen, H. C.
- 2925** Sector analysis and predictive modelling reveal iterative shoot-like development in fern fronds
Sanders, H. L., Darrah, P. R. and Langdale, J. A.
- 2935** Sclerotome-derived Slit1 drives directional migration and differentiation of Robo2-expressing pioneer myoblasts
Halperin-Barlev, O. and Kalcheim, C.
- 2947** DeltaC and DeltaD interact as Notch ligands in the zebrafish segmentation clock
Wright, G. J., Giudicelli, F., Soza-Ried, C., Hanisch, A., Ariza-McNaughton, L. and Lewis, J.
- 2957** Sprouty genes prevent excessive FGF signalling in multiple cell types throughout development of the cerebellum
Yu, T., Yaguchi, Y., Echevarria, D., Martinez, S. and Basson, M. A.
- 2969** Neuropilin-2 promotes branching morphogenesis in the mouse mammary gland
Goel, H. L., Bae, D., Pursell, B., Gouvin, L. M., Lu, S. and Mercurio, A. M.

- 2977** RETINOBLASTOMA-RELATED PROTEIN controls the transition to autotrophic plant development
Gutzat, R., Borghi, L., Fütterer, J., Bischof, S., Laizet, Y., Hennig, L., Feil, R., Lunn, J. and Grisse, W.
- 2987** A role for Notch signaling in trophoblast endovascular invasion and in the pathogenesis of pre-eclampsia
Hunkapiller, N. M., Gasperowicz, M., Kapidzic, M., Plaks, V., Maltepe, E., Kitajewski, J., Cross, J. C. and Fisher, S. J.
- 2999** *HALF FILLED* promotes reproductive tract development and fertilization efficiency in *Arabidopsis thaliana*
Crawford, B. C. W. and Yanofsky, M. F.
- 3011** Rac1 mediates morphogenetic responses to intercellular signals in the gastrulating mouse embryo
Migeotte, I., Grego-Bessa, J. and Anderson, K. V.
- 3021** Apical deficiency triggers JNK-dependent apoptosis in the embryonic epidermis of *Drosophila*
Kolahgar, G., Bardet, P.-L., Langton, P. F., Alexandre, C. and Vincent, J.-P.
- 3033** Planar polarity pathway and Nance-Horan syndrome-like 1b have essential cell-autonomous functions in neuronal migration
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- 3043** Spatial, temporal and molecular hierarchies in the link between death, delamination and dorsal closure
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- 3055** Msx genes define a population of mural cell precursors required for head blood vessel maturation
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- 3067** How to make stripes: deciphering the transition from non-periodic to periodic patterns in *Drosophila* segmentation
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- 3079** hnRNP K post-transcriptionally co-regulates multiple cytoskeletal genes needed for axonogenesis
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- 3091** Corrigendum